

*Revised*

# **Kansas Childhood Blood Lead Testing and Case Management Guidelines**



**Kansas Childhood Lead Poisoning Prevention Program  
Kansas Department of Health and Environment  
[www.unleadedks.com](http://www.unleadedks.com)  
1-866-865-3233**

**KANSAS CHILDHOOD LEAD  
PROTECTING  
KANSAS KIDS  
POISONING PREVENTION PROGRAM**



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# K A N S A S

RODERICK L. BREMBY, SECRETARY

DEPARTMENT OF HEALTH AND ENVIRONMENT

KATHLEEN SEBELIUS, GOVERNOR

March 15, 2004

Dear Health Care Provider:

Since 1997, the Kansas Childhood Lead Poisoning Prevention Program (KCLPPP) has been identified as the key source of accurate information on lead hazard awareness and lead hazard reduction activities in Kansas. KCLPPP is committed to partnerships and agency collaboration to reduce childhood lead poisoning.

Today, 26 years after lead-based paint was banned in 1978, Kansas children are still at risk for lead poisoning. According to the 2000 Census data, approximately 72% of the homes in Kansas were built before 1978. The impact of lead poisoning on children is real, but silent, as it can damage their brains and limit their abilities. There are two typical causes in lead poisoning cases:

- deteriorating paint in housing that is in poor condition from little or no maintenance; and,
- remodeling activities conducted in pre-1978 homes in which no measures were taken to prevent lead-based paint exposure.

Lead poisoning is a preventable tragedy that can dramatically impact a child's ability to learn.

The KCLPPP recently revised the *Kansas Childhood Blood Lead Testing and Case Management Guidelines* to impact the largest numbers of children at high risk for lead poisoning. Particular emphasis has been placed on children under three years of age and at high risk. The Centers for Disease Control and Prevention (CDC) estimates approximately 6,400 Kansas children under the age of six have elevated blood lead levels greater than or equal to 10 micrograms per deciliter. However, there is no safe level of lead. Early identification and treatment of lead poisoning reduces the risk that children will suffer permanent damage. A blood lead test is the **only** way to tell if a child has an elevated blood level.

Enclosed is the revised statewide guidelines. These guidelines will assist health care providers and local health agencies in a widespread effort to increase screening rates, follow-up and case management care for children with elevated blood lead levels across Kansas.

If you have any questions regarding the revised plan, please call the KCLPPP toll-free (866) 865-3233 or visit our website: [www.unleadedks.com](http://www.unleadedks.com).

Sincerely,

Anne Lowder, Director  
Kansas Childhood Lead Poisoning Prevention Program

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# Revised Kansas Blood Lead Testing Guidelines

Child health care providers shall use a blood lead test<sup>1</sup> to screen the following children:

- ✓ Child is 12 or 24 months of age<sup>2</sup>,
- ✓ Child under 6 years of age who has never received a blood lead test<sup>3</sup>,
- ✓ Child is receiving a Kan-Be-Healthy physical assessment<sup>3</sup>,
- ✓ Child receives services from Social and Rehabilitation Services (SRS), Women, Infants and Children (WIC), FirstGuard Health Plan (FG), HealthWave or HealthConnect,
- ✓ Child lives within the high-risk (gray on map) areas in Hutchinson, Kansas City, Overland Park, Salina, Topeka, or Wichita. *(See pages 31-36 for maps)*
- ✓ Child does not fit the criteria above, but parent/guardian answers “Yes” to any of the following questions<sup>4</sup>:

“Does your child...

- ☐ Live in or visit a house or apartment built before 1960? (This could include a day care center, preschool, the home of a baby-sitter or relative, etc.)
- ☐ Live in or regularly visit a house or apartment built before 1960 with previous, ongoing or planned renovation or remodeling?
- ☐ Have a family member with an elevated blood lead level?
- ☐ Interact with an adult whose job or hobby involves exposure to lead? (Furniture refinishing, making stained glass, electronics, soldering, automotive repair, making fishing weights and lures, reloading shotgun shells and bullets, firing guns at a shooting range, doing home repairs and remodeling, painting/stripping paint, antique/imported toys, and making pottery)
- ☐ Live near a lead smelter, battery plant or other lead industry? [Ammunition/explosives, auto repair/auto body, cable/wire striping, splicing or production, ceramics, firing range, leaded glass factory, industrial machinery/equipment, jewelry manufacturer or repair, lead mine, paint/pigment manufacturer, plumbing, radiator repair, salvage metal or batteries, steel metalwork, or molten metal (foundry work)]
- ☐ Use pottery, ceramic, or crystal wear for cooking, eating, or drinking?”

<sup>1</sup>A blood lead test for lead poisoning is a laboratory analysis for lead in the blood of a child or adult.

<sup>2</sup>Recommended by the American Academy of Pediatrics and the Centers for Disease Control and Prevention.

<sup>3</sup>Centers for Medicare and Medicaid Services (CMS) and the Kansas Department of Social and Rehabilitation Services (Kan Be Healthy) require a blood lead test at 12 and 24 months. Children between the ages of 36-72 months of age must receive a blood lead test if they have not been previously screened for lead poisoning.

<sup>4</sup>The risk questionnaire is critical to finding children who are not subject to targeted screening owing to risk factors such as Medicaid eligibility or pre-1960 housing. One positive response to any of the questions requires a blood lead test at this time.



# Kansas Childhood Lead Poisoning Prevention Testing and Case Management Guidelines for Childhood Lead Exposure

<b>Eligibility Criteria:</b>	Children ages 6 months to 72 months of age should be given anticipatory guidance and tested for lead exposure at each periodic health assessment visit.	<b>Confirmed Case Criteria:</b>	One venous BLL $\geq 10\mu\text{g/dL}$ , or, Two BLLs of $\geq 10\mu\text{g/dL}$ within 12 weeks (capillary or venous)
<b>Testing Criteria:</b>	Test children at 12 and 24 months of age who are receiving services from Social and Rehabilitation Services (SRS), Women Infants, and Children (WIC), FirstGuard Health Plan, HealthWave or HealthConnect. Test children between 6 months and 72 months of age who are found to be at high-risk based on Kansas Blood Lead Testing Guidelines.	<b>Case Management Criteria:</b>	One venous BLL $\geq 20\mu\text{g/dL}$ , or, Two BLLs of $\geq 15\mu\text{g/dL}$ within 12 weeks (capillary or venous)
<b>Reporting Criteria:</b>	The analyzing labs shall report all Blood Lead Levels to the Kansas Childhood Lead Poisoning Prevention Program 1-866-865-3233 and all Blood Lead Levels over $10\mu\text{g/dL}$ must be reported within 48 hours (KAR 28-1-18).	<b>Case Management Closure Criteria:</b>	2 BLLs $< 10\mu\text{g/dL}$ , 3 months apart, or Three documented, unsuccessful attempts, or Child ages out ( $> 72$ months), or Child moves out of Kansas.
		<b>Sampling Methods:</b>	A blood lead test may be capillary or venous sampling.
		<b>Blood Lead Levels (BLLs)</b>	are measured in micrograms of lead per deciliter of blood or $\mu\text{g/dL}$ .

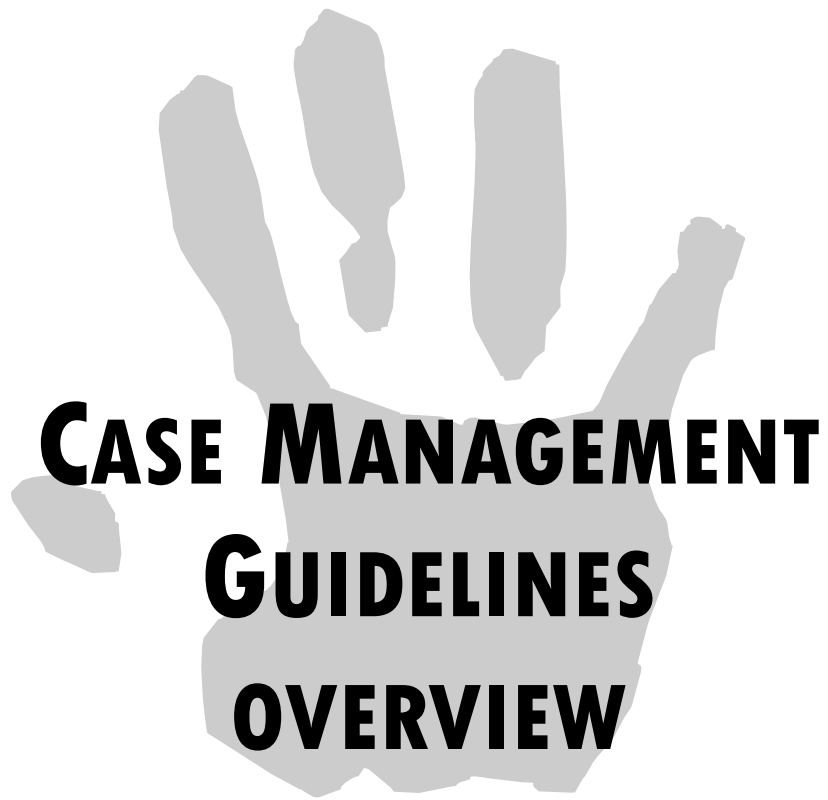
Case Management Action**			
Blood Lead	Follow-Up Action for	Early Follow-Up (first 2-4 tests after confirmation)	Late Follow-Up (after BLL begins to decline)
$< 5$ $\mu\text{g/dL}$	Re-test at 12 & 24 months	Unless exposure sources change; it is recommended that yearly testing be done until 72 months of age.	No action is taken unless exposure sources change.
5-9 $\mu\text{g/dL}$	Re-test within 3 months	Notify parents using <i>Your Child's Blood Lead Level</i> form, YCBLL1 (included in Appendix) Provide lead educational materials and the <i>Helpful Hints to Reduce Lead</i> handout (included in Appendix)	3 Months
10-14 $\mu\text{g/dL}$	Re-test within 3 months	Notify parents using <i>Your Child's Blood Lead Level</i> form, YCBLL1 (included in Appendix) Provide lead educational materials and the <i>Helpful Hints to Reduce Lead</i> handout (included in Appendix)	3 Months
15-19 $\mu\text{g/dL}$	Confirm with venous blood within 1—3 months	Notify parents using <i>Your Child's Blood Lead Level</i> form, YCBLL1 (included in Appendix) Provide family with lead educational materials and the <i>Helpful Hints to Reduce Lead</i> handout (included in Appendix)	1—3 Months
<p>If confirmatory for Case Management, begin coordination of care for child:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Make referral for environmental investigation <b>within one week</b>.</li> <li><input type="checkbox"/> Conduct Environmental Investigation <b>within 2 weeks of notification</b>.</li> <li><input type="checkbox"/> Initiate a home visit/interview <b>within one week of referral</b>.</li> <li><input type="checkbox"/> Refer all siblings for blood lead tests.</li> <li><input type="checkbox"/> Complete <i>Individualized Assessment and Plan for Care</i> forms (included in Appendix).</li> <li><input type="checkbox"/> Monitor medical and environmental case management.</li> <li><input type="checkbox"/> Screen and assess nutritional status. Provide nutritional education and refer to WIC if under age 5.</li> <li><input type="checkbox"/> Conduct developmental screening if not previously done at well-child exam. Make necessary referrals for early intervention programs.</li> <li><input type="checkbox"/> Make necessary referrals, i.e. social services, financial, etc.</li> </ul>			
			3-6 Months

15-19 µg/dL continue		<input type="checkbox"/> Provide quarterly updates to KCLPPP Child Health Coordinator. <input type="checkbox"/> Track BLL until case is closed.			
20 – 24 µg/dL	Confirm with venous blood within 2 weeks	<p>Case Management coordination begins:</p> <input type="checkbox"/> Make a referral for environmental investigation <b>within one week</b> . <input type="checkbox"/> Conduct Environmental Investigation <b>within 2 weeks of notification</b> . <input type="checkbox"/> Coordinate care between primary provider and caregiver. <input type="checkbox"/> Initiate a home visit/interview <b>within 1 week of referral</b> . <input type="checkbox"/> Provide lead awareness education and referrals. <input type="checkbox"/> Refer all siblings for blood lead test. <input type="checkbox"/> Complete <i><b>Individualized Assessment and Plan for Care</b></i> forms (included in Appendix). <input type="checkbox"/> Monitor medical case management. <input type="checkbox"/> Screen and assess nutritional status. Provide nutritional education and refer to WIC if under age 5. <input type="checkbox"/> Conduct developmental screening if not previously done at well-child exam. Make necessary referrals for early intervention programs. <input type="checkbox"/> Provide lead educational materials and the <b>Helpful Hints to Reduce Lead</b> handout (included in Appendix). <input type="checkbox"/> Refer to social services, if necessary. <input type="checkbox"/> Provide updates to KCLPPP quarterly. <input type="checkbox"/> Provide a copy of the environmental investigation to the primary care provider. <input type="checkbox"/> Track BLL until case is closed.	1—3 Months	1—3 Months	1—3 Months
25 – 44 µg/dL	Confirm with venous blood within 1 week	<input type="checkbox"/> Notify parents/caregivers <b>immediately</b> . <input type="checkbox"/> Follow case management and treatment as listed above <b>within 72 hours</b> . <input type="checkbox"/> Make a referral for environmental investigation <b>within 72 hours</b> . <input type="checkbox"/> Conduct an environmental investigation <b>within 72 hours</b> .	2 weeks—1 Months	2 weeks—1 Months	1 Month
45– 69 µg/dL	Confirm with venous blood <b>immediately</b>	<input type="checkbox"/> Notify parents/caregivers <b>immediately</b> . <input type="checkbox"/> Follow case management and treatment as listed above <b>immediately</b> . <input type="checkbox"/> Conduct an environmental investigation <b>within 48 hours</b> . Child should not be reintegrated into home environment until an environmental investigation has been complete. <input type="checkbox"/> Chelation Therapy: Consult the Mid-America Poison Control Center, 1-800-222-1222, at the KU Medical Center.	As soon as possible	As soon as possible	Chelation with subsequent follow—up
≥70 µg/dL	Confirm w/ venous blood <b>immediately</b>	<input type="checkbox"/> Hospitalize and begin medical treatment <b>immediately</b> as a medical emergency. <input type="checkbox"/> Begin case management and conduct environmental investigation <b>immediately</b> . Child should not be reintegrated into home environment until an environmental investigation has been completed. <input type="checkbox"/> Chelation Therapy: Consult the Mid-America Poison Control Center, 1-800-222-1222, at the KU Medical Center.	As soon as possible	As soon as possible	Chelation with subsequent follow—up

**\*\* Primary Care Physician is to assume Case Management for their clients with EBLs.**

*Revised 3/5/04*







# Overview of the Kansas Case Management Guidelines

These guidelines are intended to facilitate case management of children with elevated blood lead levels (EBLLs) by providing case managers information and guidance to direct the child and family. Not all assessments recommended are performed by the case manager but the case managers can become familiar with the activities and responsibilities of others, and thus be better prepared to offer them guidance, assistance, support, and assure expedient action to lower child's EBLL.

The interventions recommended are the secondary prevention of EBLLs – which is to prevent further lead exposure and to reduce blood lead levels (BLLs) in children who have been identified as having EBLLs. The ultimate goal, primary prevention – avoiding and controlling lead hazards before a child is exposed (especially older, deteriorated housing) and the elimination of lead from products with which children may come in direct or indirect contact – involves other, sometimes overlapping, issues. The importance of primary prevention should not be overlooked, since the behavioral and cognitive effects of EBLLs in young children are irreversible.

## Guidelines for Case Management Assessment and Interventions of a child with Elevated Blood Lead Levels (EBLLs)

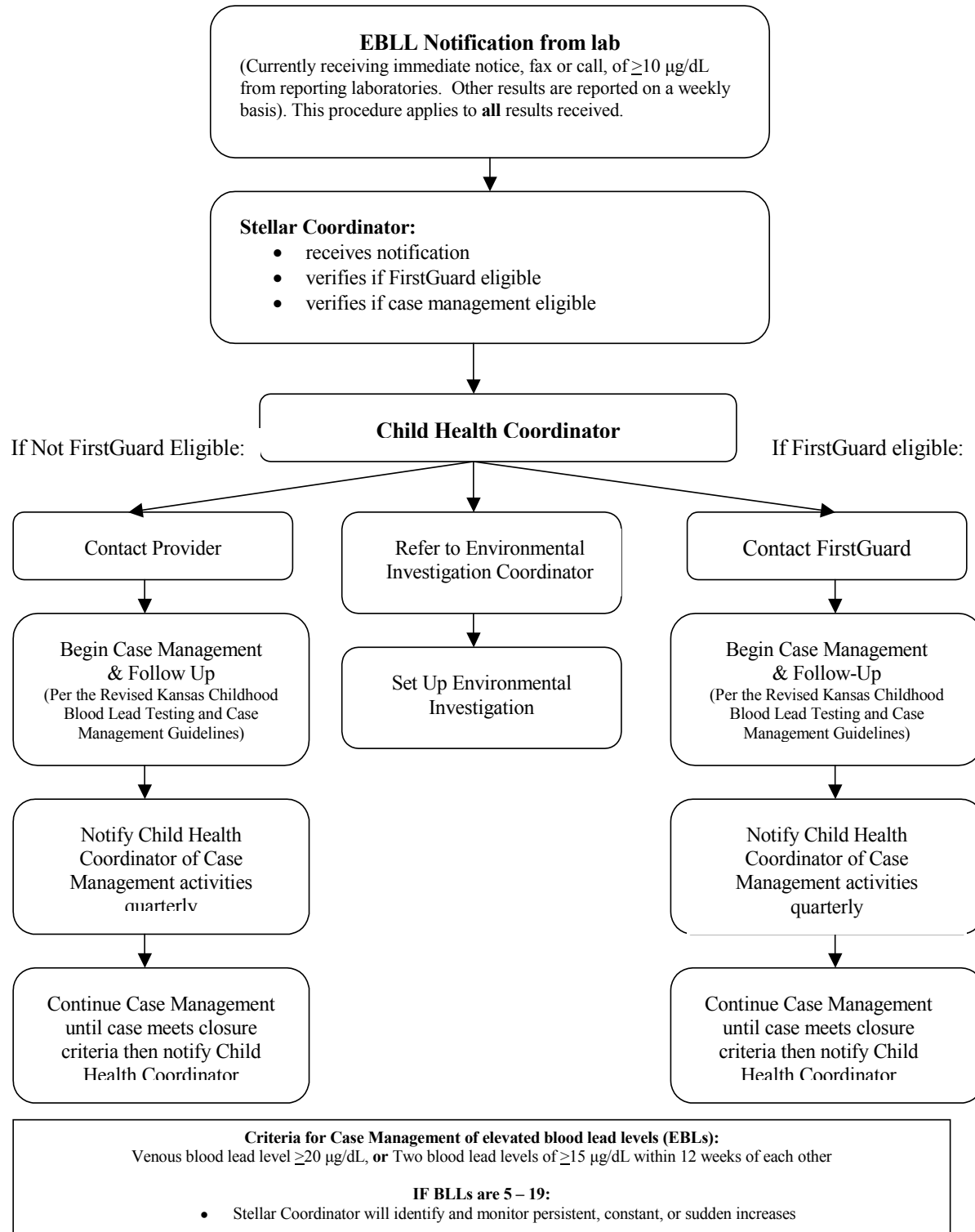
1. Test child for lead poisoning
2. Notify family of BLL for their child. Provide information and education on:
  - a. Follow up testing
  - b. Identifying possible sources of lead and how to decrease exposure
3. Provide services to all children who meet case management criteria
  - a. Complete *Individual Assessment and Plan for Care* and keep with child's chart
  - b. Call your local health department or KCLPPP for arranging an environmental investigation according to the environmental guidelines
  - c. Coordinate care with a primary health care provider for medical management of lead poisoning
  - d. Identify and refer for needed services
4. Coordinate the activities of the case management team
5. Evaluate
  - a. Length of case follow up before closure
  - b. Were outcomes met as listed on care plan
6. Close the case according to the case closure guidelines

### ***Case Management is:***

coordinating, providing, and overseeing services for EBLL children and families in recommended time frames: 1) to reduce children's BLLs below the level of concern, 2) to eliminate lead hazards in the child's environment, and 3) to increase the knowledge of the primary caregiver(s) and avoid complications of lead poisoning.

# ***Kansas Childhood Lead Poisoning Prevention Protocol for EBLs\****

*Revised April 7, 2004*





## Information about Environmental Investigations

### **Who receives environmental assessments?**

All children with BLLs  $\geq 20$   $\mu\text{g/dL}$  or 2 BLLs of 15-19  $\mu\text{g/dL}$  within 12 weeks.

### **Who to contact for Environmental Investigations?**

Local Health Department or the Kansas Childhood Lead Poisoning Prevention Program  
1-866-865-3233

(A Risk Assessor certified by the state of Kansas will conduct the Environmental Investigation)

### **What is assessed?**

Dust, paint, exposed soil and other media in the child's environment

### **When does the Environmental Investigation begin?**

Within 24 hours—1 week of notification of an EBLL depending on child's BLL (see table on pages 6—7.)

### **Where is the Environmental Investigation completed?**

The child's home and other sites where the child spends significant time

### **Components of an Environmental Investigation include:**

- Obtain an exposure history.
- Visually inspect the residential environment.
- Communicate results.
- Measure lead levels in house dust, paint, and bare soil by certified lab analysis.
- Control immediate hazards (**see Helpful Hints to Reduce Lead on pages 27-28**).
- Relocate occupants.
- Monitor ongoing interventions to reduce exposure to lead sources.
- Monitor for unidentified lead sources.

### **Goal of Environmental Investigations:**

alert parents/caregivers of  
potential lead hazards and how  
to control the lead hazards.

### **Identification of lead hazards is helpful only if:**

- \* Measures to protect the children are taken immediately
- \* Identified hazards are controlled in the children's environment



# **INDIVIDUAL ASSESSMENT AND PLAN FOR CARE FORMS**

# Individualized Assessment and Plan for Care

## Page 1

Date of Initial Contact: \_\_\_\_\_

Client Name: \_\_\_\_\_ DOB: \_\_\_\_\_ Age: \_\_\_\_\_ Gender: \_\_\_\_\_

Address: (1) \_\_\_\_\_

Home Phone: \_\_\_\_\_ Work Phone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

Address: (2) \_\_\_\_\_

Home Phone: \_\_\_\_\_ Work Phone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

Address: (3) \_\_\_\_\_

Home Phone: \_\_\_\_\_ Work Phone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

Address: (4) \_\_\_\_\_

Home Phone: \_\_\_\_\_ Work Phone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

Physician Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Nurse: \_\_\_\_\_ Fax: \_\_\_\_\_

Physician Address: \_\_\_\_\_

Name of Responsible Party: \_\_\_\_\_ DOB: \_\_\_\_\_

Name of Responsible Party: \_\_\_\_\_ DOB: \_\_\_\_\_

Emergency Contact Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_

Date Referred for Case Management: \_\_\_\_\_ Date of Home Visit: \_\_\_\_\_

### Blood Lead Levels: C = capillary V=venous

Circle

EBLL results: _____	Date: _____	C/V	Follow Up Test Due: _____
EBLL results: _____	Date: _____	C/V	Follow Up Test Due: _____
EBLL results: _____	Date: _____	C/V	Follow Up Test Due: _____
EBLL results: _____	Date: _____	C/V	Follow Up Test Due: _____
EBLL results: _____	Date: _____	C/V	Follow Up Test Due: _____
EBLL results: _____	Date: _____	C/V	Follow Up Test Due: _____
EBLL results: _____	Date: _____	C/V	Follow Up Test Due: _____
EBLL results: _____	Date: _____	C/V	Follow Up Test Due: _____
EBLL results: _____	Date: _____	C/V	Follow Up Test Due: _____
EBLL results: _____	Date: _____	C/V	Follow Up Test Due: _____
EBLL results: _____	Date: _____	C/V	Follow Up Test Due: _____

### Other Children in Household

Last Name: _____	First: _____	M/F	DOB: _____	BLL: _____
Last Name: _____	First: _____	M/F	DOB: _____	BLL: _____
Last Name: _____	First: _____	M/F	DOB: _____	BLL: _____
Last Name: _____	First: _____	M/F	DOB: _____	BLL: _____
Last Name: _____	First: _____	M/F	DOB: _____	BLL: _____
Last Name: _____	First: _____	M/F	DOB: _____	BLL: _____

# Individualized Assessment and Plan for Care

## Page 2

### DIETARY HABITS

Appetite	Poor	Fair	Good	Excellent	
Nausea/Vomiting	Yes	No	If yes: How long?		How frequent?
C/O Stomachache	Yes	No	If yes: How long?		How frequent?
Number of times per day child is eating?	_____				
Examples of food eaten with Ca <sup>++</sup> /Fe <sup>++</sup>	_____				
Weight Change?	Yes	No	Explain: _____		
Is Child on WIC?	Yes	No	Explain: _____		
Hgb level	Explain: _____				

### BEHAVIOR

Change in behavior?	Yes	No	Explain: _____
Change in sleep?	Yes	No	Explain: _____
Pica tendencies?	Yes	No	Explain: _____

### HYGIENE

Number of times per day hands are washed	_____
When are hands washed?	_____

### OTHER

Current Immunizations	Yes	No	Explain: _____
Lack of Transportation?	Yes	No	Explain: _____
Primary provider established?	Yes	No	Explain: _____
Financial assistance needed?	Yes	No	Explain: _____
Lack of health insurance?	Yes	No	Explain: _____
Domestic violence, abuse or neglect?	Yes	No	Explain: _____
Barrier to learning for caregiver?	Yes	No	Explain: _____
Language Barriers	Yes	No	Explain: _____
Cultural differences	Yes	No	Explain: _____
Other:	Yes	No	Explain: _____
Other:	Yes	No	Explain: _____

# Individualized Assessment and Plan for Care

## Page 3

### TEACHING

Lead poisoning explained	Yes	No	Verbal	Written
Possible long-term effects explained	Yes	No	Verbal	Written
Importance of diet explained (↑ Ca, ↑ Fe, ↓ Fat)	Yes	No	Verbal	Written
Cleaning techniques explained	Yes	No	Verbal	Written
Proper hygiene explained	Yes	No	Verbal	Written
Environmental sources	Yes	No	Verbal	Written
Specific measures to reduce lead exposure	Yes	No	Verbal	Written

Individualized education plan: \_\_\_\_\_  
 \_\_\_\_\_

### REFERRALS

Environmental Services for EBL Investigation	Yes	No	Date of referral: _____ Date of investigation: _____
Release of information signed	Yes	No	
Medicaid or other insurance Information	Yes	No	_____ _____
Primary Care Physician Or clinic	Yes	No	_____ _____
WIC or food pantry	Yes	No	_____
SRS	Yes	No	_____
HUD	Yes	No	_____
Emergency Shelter	Yes	No	_____
Head Start	Yes	No	_____
Parents As Teachers	Yes	No	_____
Local Church	Yes	No	_____
Success by Six	Yes	No	_____
Counseling/Mental Health	Yes	No	_____
Financial Services	Yes	No	_____
Other:	Yes	No	_____
Other:	Yes	No	_____
Other:			_____

\_\_\_\_\_  
Case Manager Signature

\_\_\_\_\_  
Date



**Kansas Childhood Lead Poisoning Prevention Program Care Plan**  
**Page 4**

Client Name: \_\_\_\_\_ DOB: \_\_\_\_\_  
 (Last) (First) (M.I.)

County of Residence: \_\_\_\_\_

Case Manager: \_\_\_\_\_

<b><u>Date</u></b>	<b><u>Nurse's Diagnosis</u></b>	<b><u>Interventions</u></b>	<b><u>Outcomes</u></b>
<u>mm/dd/yy</u>	Knowledge deficits related to diagnosis of elevated blood lead level/lead poisoning.	Provide parent/caregiver education regarding lead poisoning. Assist and support family in understanding instruction given.	Parent/ caregiver will be knowledgeable regarding lead and assist in identifying interventions to resolve the problem within one month.
<u>mm/dd/yy</u>	Potential for lead poisoning related to continued exposure to lead contaminated environment and risk producing behaviors.	Perform home visits to assess behaviors. Continue instruction RE: preventive actions & support parent/caregiver in positive actions. Collaborate with certified Lead Risk Assessor if level indicates environmental lead hazards and interventions.	Family will decrease or eliminate exposures to lead hazards in environment w/in 1-2 months.  Family will attempt to correct child's risk producing behaviors based upon recommendations of the CM and licensed Lead Risk Assessor w/in 1-2 months. Child and/or parent will demonstrate proper hygiene techniques for handwashing w/in 1 week.
<u>mm/dd/yy</u>	Knowledge deficit relates to nutrition requirements for age and for recommended nutrition needs to assist in reducing gastrointestinal absorption of lead.	Obtain hemoglobin to rule out anemia. Instruct parent or caregiver RE: nutrition related to age requirements & nutrition needs specific to the prevention of lead poisoning. Refer to WIC if under age 5. Refer to nutrition counseling if indicated.	Parent/caregiver will be knowledgeable regarding child's nutritional needs. Child will be routinely assessed for adequate growth & development. BLL will be <10 µg/dL. Child will maintain age appropriate hemoglobin.
<u>mm/dd/yy</u>	Potential for delays in growth & development R/T diagnosis of EBLL.	Assess growth & development per guidelines or schedule. Refer to appropriate agencies for further evaluation.	Parent/caregiver will be knowledgeable regarding child's developmental needs. Child will maintain adequate growth & development.

# Kansas Childhood Lead Poisoning Prevention Program (KCLPPP) Quarterly Progress Report

**Date:** \_\_\_\_\_

County: \_\_\_\_\_

Completed by: \_\_\_\_\_

Reporting Period: 1<sup>st</sup> Quarter  
(circle one) Due 10/31

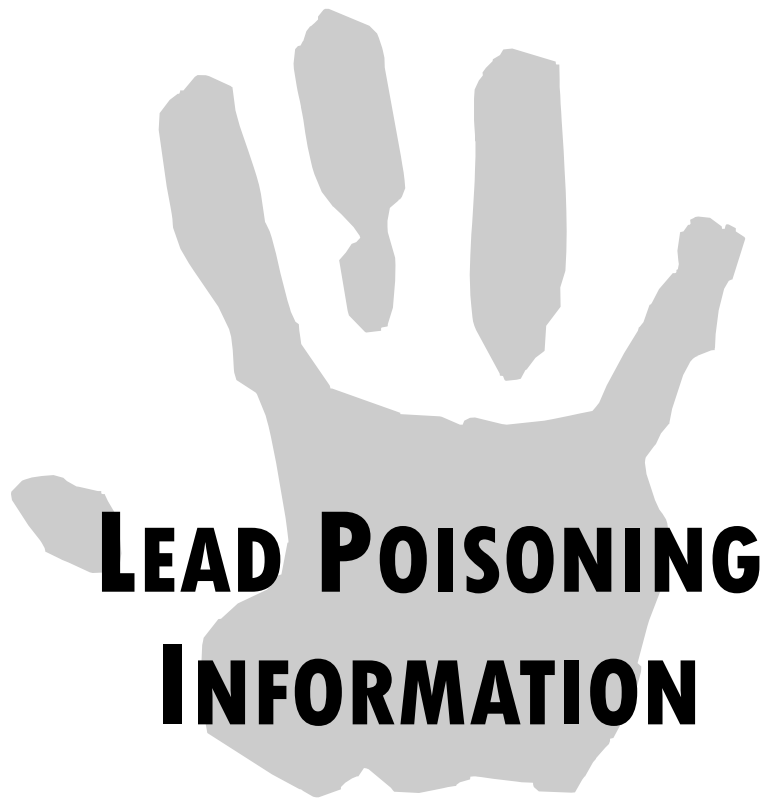
2<sup>nd</sup> Quarter  
Due Jan 30

3<sup>rd</sup> Quarter  
Due April 30

4<sup>th</sup> Quarter  
Due July 30

[illegible]

Prior # of Cases	
# of New Cases	+
# of Closed Cases	-
Total Cases	=





## Lead Poisoning Information

**LEAD POISONING AND PREVENTION:** Lead poisoning is a preventable pediatric health problem affecting Kansas' children. Lead is a toxic metal that produces many adverse health effects. It is persistent and cumulative. Childhood lead poisoning occurs in all population groups and income brackets. The Center for Disease Control and Prevention (CDC) estimates the risk of lead poisoning is highest for minority children from low-income families. There is no safe level of lead. Early identification and treatment of lead poisoning reduces the risk that children will suffer permanent damage. A blood lead test is the only way to tell if a child has an elevated blood level.

**PATHWAYS TO LEAD EXPOSURE:** Inhalation and ingestion.

**SIGNS AND SYMPTOMS:** Most children are asymptomatic. Some signs and symptoms may include: headache, lack of appetite, vomiting, fatigue, anemia, stomachache, constipation, or seizures.

**HEALTH EFFECTS:** Lead travels through the blood to every organ in the body. Lead interferes with the development of the architecture of the brain, as well as the biochemical connection between the cells of the brain. When lead enters the blood stream it collects in soft tissues of the body and it also settles in the bones and teeth, where it is stored for many years. Lead poisoning can be difficult to recognize and can damage a child's central nervous system, brain, kidneys, and reproductive system. Even low levels of lead are associated with decreased intelligence, impaired neurobehavioral development, decreased stature and growth, and impaired hearing acuity.

Pregnant Women, fetuses, infants, and children are more vulnerable to lead exposure than adults since lead is more easily absorbed into growing bodies. There are several reasons for this:

- During pregnancy, lead has the ability to pass through the placenta to the developing fetus and the mother's hormone changes can demineralize bone which releases lead into the blood.
- In pregnant women, elevated lead levels can cause low birth weight or miscarriage.
- The uptake of lead by a fetal brain is greater during gestation than that occurring after birth.
- In children, the developing brain has not yet completely formed the crucial blood-brain barrier, the "selective gate" which helps block toxins from the brain in adults, therefore, lead can pass directly from the bloodstream into the brain.
- For every 10 µg/dL increase in blood lead levels, a child's IQ is lowered by four to seven points.
- Children are more likely to play in areas where they can be exposed to lead and are more likely to put contaminated hands, fingers, and objects into their mouths.



### **LEAD ABSORPTION:**

- Adults: Approximately 5-15% of ingested lead is absorbed.
- Children: Approximately 50% of ingested lead is absorbed.

**SOURCES OF LEAD EXPOSURE:** Lead-based paint can be found in most homes built before 1950-and many homes built before 1978. The federal government banned lead-based paint from housing in 1978. According to the 2000 US Census Data, approximately 72% of the homes in Kansas were built before 1978. Even though lead has been banned from residential paint for over 25 years, it can still exist under other layers of paint or wallpaper.

There are many ways people can be exposed to lead. Research suggests that the primary sources of lead exposure are through:

- Deteriorating lead-based paint
- Lead contaminated dust
- Lead contaminated soil

Lead can also be found on walls, woodwork, floors, windowsills, eating and playing surfaces, or in the dirt outside the home. Sometimes children will eat paint that is chipping or peeling because it tastes sweet or because they have pica (a condition characterized by eating non-food items).

In addition, renovation or maintenance projects that disturb lead-based paint can create a lead dust hazard that can be inhaled or can settle on toys, walls, floors, tables, carpets or fingers. Lead can be found in aging water pipes and non-glossy vinyl window blinds made before 1996. Parents whose hobby or occupation involves working with or around lead (car repair, battery manufacturing, welding, making bullets, staining glass, refinishing furniture, remodeling, etc.) can unknowingly bring lead dust home. Certain ethnic, traditional or home remedies also involve lead ingestion. For example, some cultures-unaware of the risks of lead poisoning-use the powders *Azarcon*, *Greta*, or other home remedies that contain lead, to relieve an upset stomach.

Lead poisoning is a threat to children all year long; however, in spring and summer, we expect a greater exposure to lead dangers because of the activities associated with warmer weather. One early sign of spring is open windows and doors. Windows and doors painted with lead paint create lead dust when opened and closed repeatedly. Another sign of warm weather is children playing outside. Lead may be found around yards and in soil where children play. Finally, spring is often a time for starting home renovations and repairs, which may disturb lead paint and create lead dust.

Parents can protect their children from lead poisoning. Cleaning dusty areas of the home with a wet cloth and warm soapy water, is one way to safely remove lead dangers. (See Appendix 3: *Helpful Hints to Reduce Lead*)

**NUTRITION:** A diet low in fat and high in iron/protein, calcium and vitamin C can reduce the lead the body absorbs. A diet that lacks these nutrients can cause the body to increase lead absorption.



## **BLOOD LEAD COLLECTION**

The Kansas Division of Health and Environmental Laboratories (DHEL) provides different methodologies for blood lead sample collection at no cost to Kansas providers for children six years of age or under.

DHEL methodologies include: collection of a venous sample, collection of a capillary sample using a capillary tube (microtainer or vacutainer), collection of a capillary sample placing blood drops on filter paper, and collection of a capillary sample and using the Lead Care analyzer. Supplies must be ordered on a “Requisition for Laboratory Specimen Kits” available on the Kansas Childhood Lead Poisoning Prevention Program (KCLPPP) website: [www.unleadedks.com](http://www.unleadedks.com).

Facilities may only submit samples for children older than six if they are a part of ongoing active investigation to follow-up on a previously positive result.

## **FILTER PAPER SAMPLES**

Collection technique is of primary importance when obtaining samples for blood lead. Lead is everywhere in the environment. Take great care in efficiently cleaning the specimen finger of the patient and to prevent contamination from the environment. If possible, wash hands with warm water and soap prior to collection.

Please follow this collection technique to ensure a sample that is free from contamination and adequate for optimum analysis:

1. Fill out lab requisition form completely.
2. Lay white paper towel out on a clean surface. (Brown/recycled paper towel may contain lead)
3. Place gauze on paper towel.
4. Open alcohol wipes. Place them on paper towel.
5. Place band-aid on the paper towel.
6. Fold back protective cover to expose the filter paper. Secure the flap behind the filter paper so that it doesn't get in the way of collecting your sample.
7. Put on powder-free gloves.
8. Isolate child's finger and thoroughly scrub side of finger with the two alcohol wipes. Wipe dry with clean gauze. (If child touches that site to any surface you must re-clean area with your cleanest alcohol wipe.)
9. Use lancet to pierce the skin of the prepped finger. Wipe off first drop of blood with gauze.
10. Allow one blood drop to accumulate and fall onto one of the circles on the filter paper. Collect a second drop on the second circle and a third drop in the third circle. It may take a minute to get a sufficient drop of blood.
  - \* One drop of blood per circle.
  - \* Drops must be at least the size of a whole punch.
  - \* The drops must soak through the back of the filter paper. Smeared samples that do not soak through the back will not be accepted.
11. Please allow blood spots to dry for two hours. Carefully tuck flap to create a “matchbox.” (Pay special attention to not touch or contaminate the filter paper area.)
12. Place lab slip and filter paper into envelope.


Blood lead collection must be done properly to ensure an appropriate sample. Be sure to clean the site completely, prevent contamination, prevent clotting, and mail promptly. When sending in specimens, request forms must be completely filled out, legible, correct, request name must match tube label, correct date of birth, and remember to call for special cases (such as siblings over 6 years or patients followed after 6 years of age). All demographics must be listed on the form. Samples will be rejected for insufficient quantity, specimen clotted, and sample submission form not complete.



## Your Child's Blood Lead Level

*Lead can cause damage before any signs show. That's why blood lead tests are so important.  
Blood lead levels are measured in "micrograms of lead per deciliter" of blood, or "µg/dL."*

Child's Name: \_\_\_\_\_ Blood lead level \_\_\_\_\_

- 
- ▣ **Less than 5**      No action is taken unless exposure sources change.  
Continue to test yearly.
  - ▣ **5-14**              Retest within 3 months.  
Feed your child a healthy diet and help keep your child safe from lead. (See back of this page)  
Reduce lead in your child's environment. See Helpful Hints to Reduce Lead handout.
  - ▣ **15-19**             Confirm with a venous blood lead test within one to 3 months.  
Feed your child a healthy diet that will help protect from lead. (See back of this page)  
Reduce lead in your child's environment. See Helpful Hints to Reduce Lead handout.
  - ▣ **20-24**             Confirm with a venous blood lead test within 2 weeks.  
Feed your child a healthy diet that will help protect from lead. (See back of this page)  
Reduce lead in your child's environment. See Helpful Hints to Reduce Lead handout.
  - ▣ **25-44**             Confirm with a venous blood lead test within 1 week.  
Take your child for a medical exam.  
Feed your child a healthy diet that will help protect from lead. (See back of this page)  
Reduce lead in your child's environment. See Helpful Hints to Reduce Lead handout.
  - ▣ **45-69**             Confirm with a venous blood lead test IMMEDIATELY.  
Take your child for a complete medical evaluation immediately.  
Reduce lead in your child's environment. See Helpful Hints to Reduce Lead handout.
  - ▣ **70 or above**      **A MEDICAL EMERGENCY.**  
Get immediate medical treatment.  
Contact local health department or the Kansas Childhood Lead Poisoning Prevention  
Program to identify the lead hazards in your child's environment.

For more information contact:  
Your Local Health Department  
or

**Kansas Childhood Lead Poisoning Prevention Program**  
**1-866-865-3233 Toll Free**  
**lead@kdhe.state.ks.us**  
**www.unleadedks.com**



## A HEALTHY DIET CAN HELP PREVENT LEAD POISONING

*ENCOURAGE YOUR CHILD TO EAT REGULARLY, at least 3 times a day.*

All children can benefit from eating foods that are:

### High in iron and protein

Good sources include:

- lean red meats, chicken and fish
- leafy green vegetables, such as spinach and broccoli
- dried beans, peas and lentils
- dried fruits, such as raisins, prunes and apricots
- iron-enriched breads and cereals

### High in vitamin C

Good sources include:

- citrus fruits and juices
- tomatoes, raw cabbage, broccoli and greens
- potatoes and sweet potatoes

### High in calcium

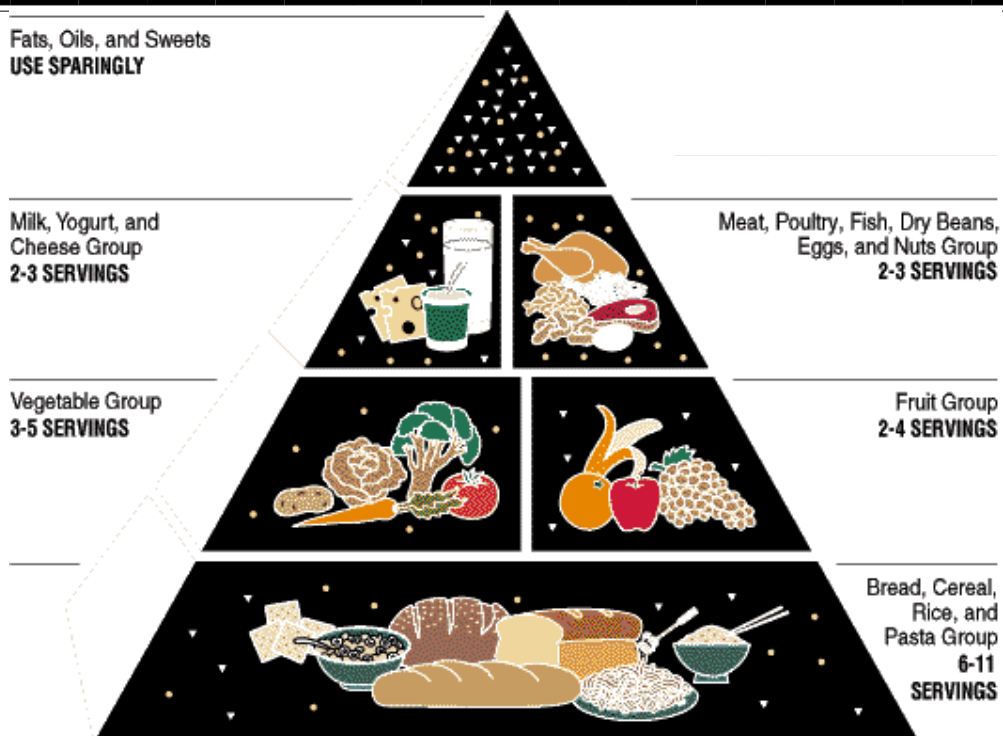
Good sources include:

- milk, cheese and yogurt
- leafy green vegetables
- salmon and sardines

### Low in fats and oils

Avoid:

- fried foods, such as French fries, fried chicken and potato chips
- pastry, cakes and other baked goods
- butter, oil and lard
- hamburgers, bologna, salami, hot dogs and bacon



## El resultado de la prueba de plomo en la sangre de su hijo

*El plomo puede causar daños antes de que aparezca algún síntoma. Es por eso que las pruebas de plomo en la sangre son tan importantes. El nivel de plomo en la sangre se mide en "microgramos" de plomo por "decilitro" de sangre, o "mcg/dl"*

**Nombre del hijo:** \_\_\_\_\_ **Nivel de plomo en la sangre** \_\_\_\_\_

- ▣ **Menos de 5** No se toma ninguna medida a menos que cambien las fuentes o posibilidades de exposición. Continúe los exámenes anualmente.
- ▣ **5-14** Vuelva a examinarse dentro de tres meses.  
Alimente a su hijo con una dieta saludable y manténgalo alejado del plomo (Consulte el reverso de esta página)  
Reduzca el acceso al plomo alrededor de su hijo. Vea el folleto Consejos Útiles Para Reducir El Plomo.
- ▣ **15-19** Confirme con una prueba de sangre dentro de 3 meses.  
Alimente a su hijo con una dieta saludable y manténgalo alejado del plomo (Consulte el reverso de esta página)  
Reduzca el acceso al plomo alrededor de su hijo. Vea el folleto Consejos Útiles Para Reducir El Plomo.
- ▣ **20-24** Confirme con una prueba de plomo en la sangre venosa dentro de 2 semanas.  
Alimente a su hijo con una dieta saludable y manténgalo alejado del plomo (Consulte el reverso de esta página)  
Reduzca el acceso al plomo alrededor de su hijo. Vea el folleto Consejos Útiles Para Reducir El Plomo.
- ▣ **25-44** Confirme con una prueba de plomo en la sangre venosa dentro de 1 semana.  
Lleve a su hijo a que le hagan un examen médico.  
Alimente a su hijo con una dieta saludable y manténgalo alejado del plomo (Consulte el reverso de esta página)  
Reduzca el acceso al plomo alrededor de su hijo. Vea el folleto Consejos Útiles Para Reducir El Plomo.
- ▣ **45-69** Confirme INMEDIATAMENTE con una prueba de plomo en la sangre venosa:  
Lleve a su hijo a que le hagan una evaluación médica completa inmediatamente.  
Reduzca el acceso al plomo alrededor de su hijo. Vea el folleto Consejos Útiles Para Reducir El Plomo.
- ▣ **Más de 70** **EMERGENCIA MÉDICA.**  
Someta de inmediato al niño a un tratamiento médico.  
Comuníquese con el departamento de salud local o con el Programa Para Protección De la Niñez en Prevención del Envenenamiento a causa del Plomo en Kansas para identificar las fuentes o posibilidades peligrosas del plomo en el entorno de su hijo.

Para más información comuníquese con:  
El Departamento de Salud de su localidad

o

el Programa Para Protección De la Niñez en  
Prevención del Envenenamiento a causa del Plomo en Kansas  
1-866-865-3233    lead@kdhe.state.ks.us    www.unleadedks.com

## UNA DIETA SALUDABLE PUEDE AYUDAR A PREVENIR ENVENENAMIENTO CON PLOMO

Todos los niños se pueden beneficiar al comer alimentos que son:

### Altos en hierro y proteínas

Buenas fuentes incluyen:

- Carne roja sin grasa, pollo y pescado
- Vegetales de hojas verdes, como espinaca y brocoli
- Frijoles, chícharos y lentejas
- Frutas secas
- Pan y cereal enriquecido con hierro

### Altos en vitamina C

Buenas fuentes incluyen:

- Frutas cítricas y jugos
- Tomates, repollo crudo, brocoli y verduras
- Papas y camotes

### Altos en calcio

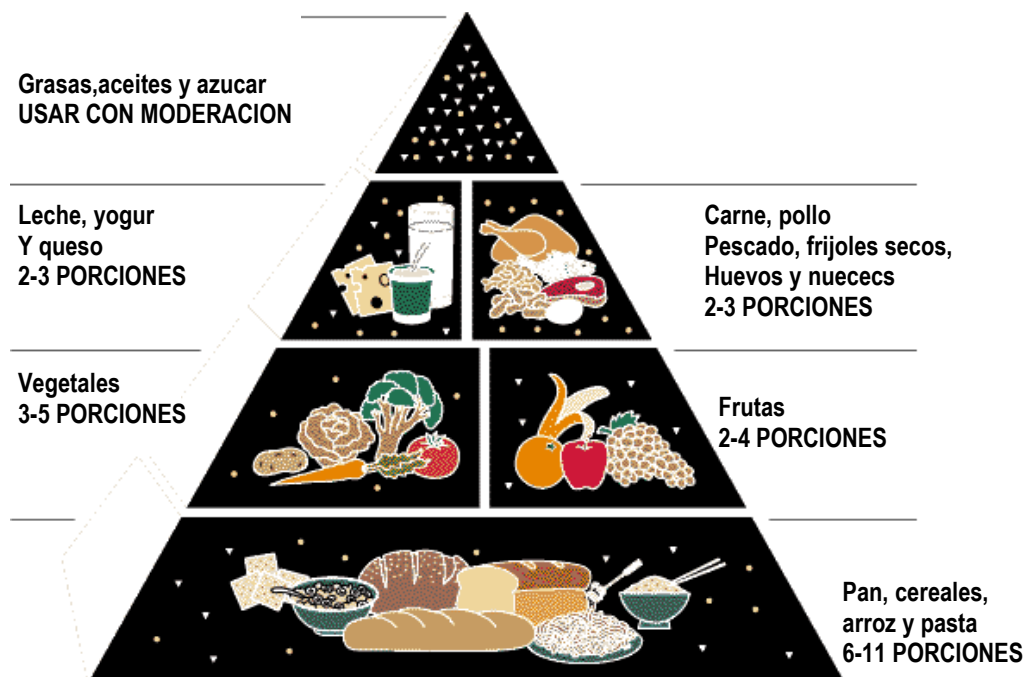
Buenas fuentes incluyen:

- Leche, queso y yogur
- Vegetales de hojas verdes
- Salmon y sardinas

### Bajos en grasa y aceite

Evite:

- Comidas fritas como: tales como papas fritas, pollo frito y papitas en bolsa
- Panesitos, pasteles, repostería
- Mantequilla, aceite y manteca
- Hamburguesas, bologna, salami, hot dogs y tocino.





## Helpful Hints to Reduce Lead

### Lead is:

- a toxic metal
- produces many adverse health effects particularly in young developing children

### How are people exposed to lead?

- deteriorating paint
- dust
- air
- contaminated soil

### Where is lead found?

- window sills and troughs
- floors or steps
- carpet, rugs, and floor mats
- furniture
- radiators, grates and registers
- porches
- soil and sandboxes



The recommendations are not a one-time, permanent solution. Frequent, thorough cleaning and maintenance are essential, and so is close attention to children's hygiene and hand-to-mouth behavior. Pay close attention to what they put into their mouths, and continue to have their blood tested as often as your doctor or clinic recommends

### **Warning: Lead is toxic!**

Children and pregnant women should not take part in the recommendations to reduce lead exposure. When cleaning, wash hands frequently to prevent contamination or wear gloves if available.

## Helpful Hints to Reduce Lead

Lead Source	Actions to Take or Avoid
Hard Surfaces	<ul style="list-style-type: none"> <li>• Mop floors with soapy water</li> <li>• Clean window sills and wells with soapy water</li> <li>• Use disposable paper towels for lead cleaning only</li> <li>• Use separate buckets for wash and rinse water</li> <li>• Lightly spray floors with water before sweeping</li> <li>• Place a blanket or rug on floor when child plays there</li> <li>• Keep children and their belongings away from windows</li> <li>• Open double-hung windows from the top</li> <li>• Areas with chipping/peeling paint should be covered with heavy tape, paneling, heavy wallpaper, contact paper, or you can push furniture against the area</li> </ul>

Lead Source	Actions to Take or Avoid
Carpet Surfaces	<ul style="list-style-type: none"> <li>• Use a HEPA vacuum for cleaning, if possible.</li> <li>• If a HEPA vacuum is not available, use "HEPA-type" or "allergy" filter bags.</li> <li>• Vacuum for an extended time.</li> <li>• Use care if removing older carpets that are heavily contaminated with dust.</li> </ul>
Limiting Paint Exposure	<ul style="list-style-type: none"> <li>• Wipe off loose paint using damp disposable paper towels, cloths or rags.</li> <li>• Block access to chipping paint with furniture.</li> <li>• Put contact paper over chipping paint.</li> <li>• Mist areas containing loose paint chips with water, sweep up, and seal in a plastic bag and properly dispose of immediately.</li> <li>• Seal off or enclose areas with small amounts of chipping paint.</li> <li>• Do not use hazardous methods of removing paint, such as mechanical sanding, open-flame burning, or chemical removal using methylene chloride.</li> <li>• Use safer alternatives for removing paint, such as wet scraping and wet sanding.</li> <li>• When permanently removing lead, use a certified abatement contractor. For a list of certified contractors call 1-866-865-3233.</li> <li>• Repaint with two coats of high-quality paint. When choosing your new paint, remember that you want a cleanable surface that will hold up under frequent washings.</li> <li>• Do not allow children to eat loose paint or chew on windowsills or other painted surfaces.</li> </ul>
Limiting Soil Exposure	<ul style="list-style-type: none"> <li>• Cover bare soil with grass, plants, gravel or wood chips.</li> <li>• Do not let children play near walls of house or garage or on bare soil.</li> <li>• Have children play in grassy area or sandbox that can be covered.</li> <li>• Wash children's hands after playing outside or playing with pets.</li> <li>• Remove shoes before entering the house.</li> <li>• Use a doormat to reduce track-in of outdoor dust and soil.</li> </ul>
Hygiene	<ul style="list-style-type: none"> <li>• Wash children's hands, toys, bottles and pacifiers often.</li> <li>• Do not allow children to eat food off the floor.</li> </ul>
Water	<ul style="list-style-type: none"> <li>• Use cold water from faucet for drinking, cooking or making baby formula.</li> <li>• Run water from the cold for 1 minute until temperature changes.</li> </ul>

**Source:** United States Environmental Protection Agency, *Basis for Educational Recommendations on Reducing Childhood Lead Exposure* (747-R-00-001) (Washington, DC: U.S. EPA, June 2000).

**For more information contact:**  
**Kansas Childhood Lead Poisoning Prevention Program**  
**1-866-865-3233 e-mail: [lead@kdhe.state.ks.us](mailto:lead@kdhe.state.ks.us)**  
**[www.unleadedks.com](http://www.unleadedks.com)**



# Consejos Útiles Para Reducir El Plomo

## El plomo es:

- un metal tóxico
- que produce muchos efectos negativos en la salud, especialmente durante el desarrollo en los niños pequeños.

## ¿Cómo se exponen las personas al plomo?

- pintura en deterioro
- polvo
- aire
- agua potable
- tierra contaminada

## ¿Dónde se encuentra el plomo?

- los marcos y repisas
- pisos o gradas (escalones)
- alfombras y cubrepisos
- muebles
- radiadores, parrillas y registradoras
- pórticos (porches)
- tierra y cajas de arena



Las recomendaciones no son soluciones permanentes. El aseo y el mantenimiento frecuente y detallado son esenciales, además de prestar mucha atención a la higiene y a la costumbre de los niños de ponerse las manos en la boca. Preste mucha atención a lo que los niños se llevan a la boca y continúe realizando exámenes de sangre con la frecuencia que le recomienda su médico o clínica.

### **Advertencia: ¡El plomo es tóxico!**

Los niños y las mujeres embarazadas no deben participar en las actividades para reducir la exposición al plomo. Cuando limpie, lávese frecuentemente las manos para prevenir la contaminación o use guantes si los tiene disponibles.

## Consejos útiles para reducir el plomo

Fuente del plomo	Medidas que se deben tomar o evitar
Superficies duras	<ul style="list-style-type: none"> <li>· Limpiar los pisos con agua y jabón.</li> <li>· Limpiar las repisas y marcos de las ventanas con agua y jabón.</li> <li>· Usar sólo toallas de papel desechables para limpiar donde haya plomo.</li> <li>· Usar cubetas de agua separadas para lavar y enjuagar.</li> <li>· Rocíar los pisos suavemente con agua antes de barrer.</li> <li>· Colocar una cobija o una alfombra en el piso cuando juegue ahí un niño.</li> <li>· Mantener a los niños y sus pertenencias alejados de las ventanas.</li> <li>· Abrir las ventanas desde arriba si es posible.</li> <li>· Las áreas con pintura que se están descascarando o soltando se deben cubrir con cinta adhesiva gruesa, paneles, papel mural o puede bloquear el lugar con muebles.</li> </ul>

Fuente del plomo	Medidas que se deben tomar o evitar
Superficies Alfombradas (carpetas)	<ul style="list-style-type: none"> <li>• Usar una aspiradora HEPA, si es posible.</li> <li>• Si no hay una disponible, usar bolsas de filtro del tipo HEPA o para alergias.</li> <li>• Aspirar durante un período largo de tiempo.</li> <li>• Tener precaución al quitar alfombras viejas que estén fuertemente contaminadas con polvo de plomo.</li> </ul>
Limitar la exposición a la pintura	<ul style="list-style-type: none"> <li>• Limpiar inmediatamente los pedazos sueltos de pintura.</li> <li>• Limpiar la pintura suelta usando toallas de papel desechables o trapos húmedos.</li> <li>• Bloquear con muebles el acceso a la pintura que se descascara.</li> <li>• Colocar papel mural autoadhesivo sobre la pintura que se está descascarando.</li> <li>• Rociar el pórtico (porche) con agua, barrer los pedazos sueltos de pintura y el polvo. Sellar los pedazos sueltos y el polvo en una bolsa plástica y botarla inmediatamente en la basura.</li> <li>• Sellar o aislar áreas que contengan pequeñas cantidades de pintura que se están descascarando.</li> <li>• No usar métodos peligrosos para remover la pintura, como lijar, quemar, o químicos que contengan cloruro de metileno.</li> <li>• Usar alternativas seguras para eliminar la pintura, como raspar o lijar en húmedo.</li> <li>• Usar un contratista certificado en la disminución del plomo si es necesario. Llame al 1-866-865-3233 para solicitar una lista de los contratistas certificados.</li> <li>• Volver a pintar con dos capas de pintura de buena calidad. Al escoger la pintura nueva, recuerde que desea un superficie que se limpie y que resista los lavados frecuentes.</li> <li>• No permita que los niños coman pedazos sueltos de pintura o que muerdan las repisas de las ventanas u otras superficies pintadas.</li> </ul>
Limitar la exposición a la tierra	<ul style="list-style-type: none"> <li>• Cubrir la tierra suelta con grama, plantas, gravilla o pedacitos (chips) de madera.</li> <li>• No permitir que los niños jueguen cerca de las paredes de la casa, el garaje o en la tierra.</li> <li>• Haga que los niños jueguen en áreas con grama o en una caja de arena.</li> <li>• Lavar las manos de los niños después de que ellos jueguen afuera o con mascotas.</li> <li>• Quitarse los zapatos antes de entrar a la casa.</li> <li>• Usar una alfombra pequeña para limpiarse los zapatos antes de entrar a la casa.</li> </ul>
Higiene	<ul style="list-style-type: none"> <li>• Lavar frecuentemente las manos, juguetes, biberones y chupetes de los niños.</li> <li>• No permitir que los niños coman alimentos que se han caído al suelo.</li> <li>• Almacenar los alimentos de manera adecuada.</li> </ul>
Agua	<ul style="list-style-type: none"> <li>• Usar agua fría de la llave para beber, cocinar o preparar la fórmula para su bebé.</li> <li>• Dejar correr el agua fría un minuto hasta que cambie de temperatura.</li> </ul>

Fuente: United States Environmental Protection Agency, *Basis for Educational Recommendations on Reducing Childhood Lead Exposure* (747-R-00-001) (Washington, DC: U.S. EPA, junio de 2000).  
(Agencia de protección ambiental de los Estados Unidos)

**Para mayor información, comuníquese con:**  
**Kansas Childhood Lead Poisoning Prevention Program**  
**1-866-865-3233 Correo electrónico: [lead@kdhe.state.ks.us](mailto:lead@kdhe.state.ks.us)**  
**[www.unleadedks.com](http://www.unleadedks.com)**



# **APPENDIX 5**

## **HIGH RISK AREA MAPS**



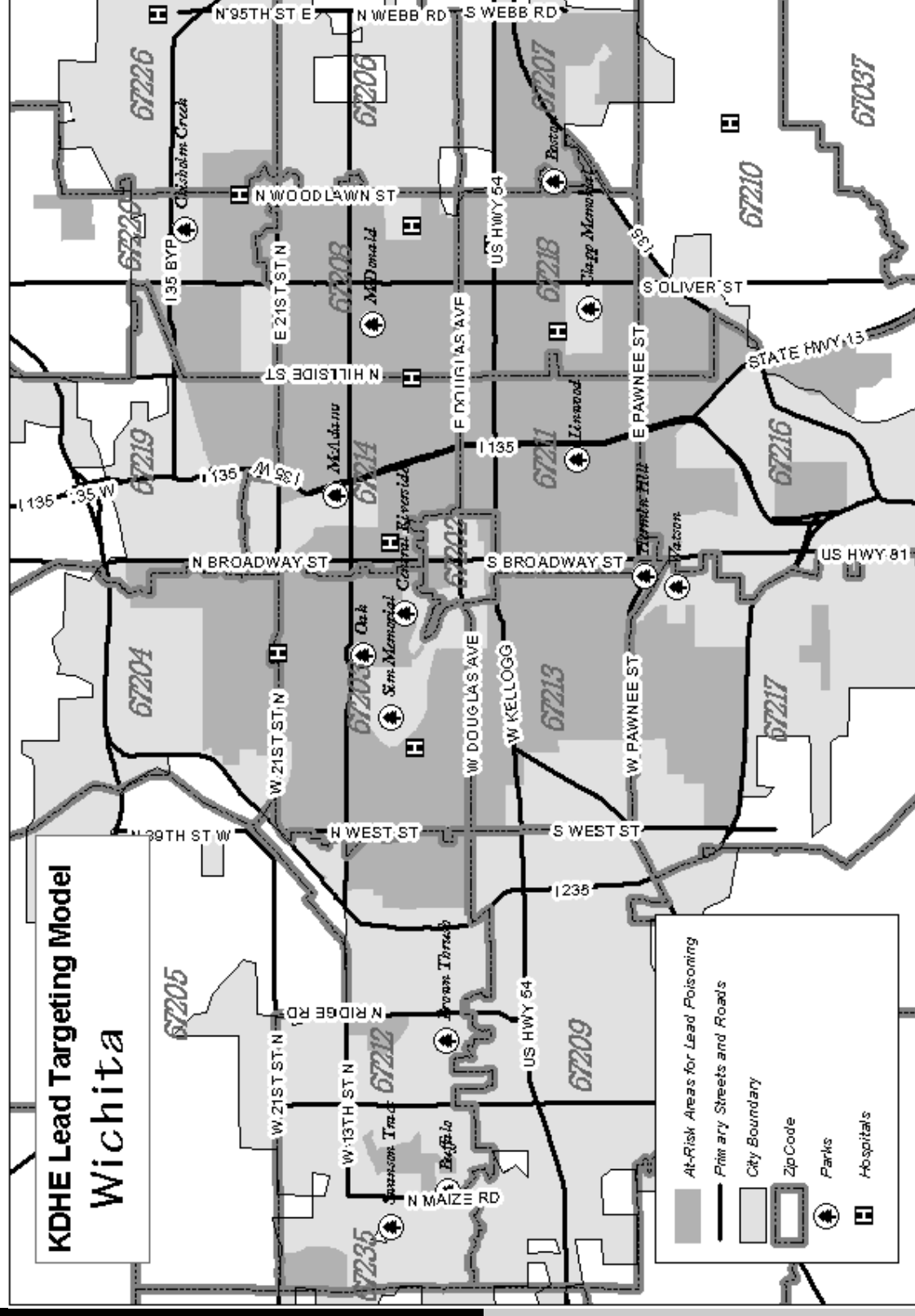
# Wichita Vicinity High Risk Area Map

**Children  
who live  
in the  
high-risk  
area  
(gray on  
map)  
should  
be tested  
for lead  
today!**

**Targeting model used to determine “At-Risk” areas.**

Model developed using four census variables:

- 1) density of pre 1960 housing
- 2) density of minority population
- 3) density of impoverished population
- 4) density of children age 5 and under.



**For more information contact: Sedgwick County Lead Poisoning Prevention Program (316)-660-7387**  
**The Kansas Childhood Lead Poisoning Prevention Program toll-free (866)-865-3233**  
**Mid America Poisoning Control Center toll-free (800)-222-1222.**

*This map product is intended to provide users with better information regarding lead poisoning potential for young children. This map product is provided without representation or implied or expressed warranty of accuracy for any uses beyond those expressed. The originating agencies are not responsible for publication or use of this product for purposes other than expressed. This product may be corrected or updated as necessary without prior notification.*

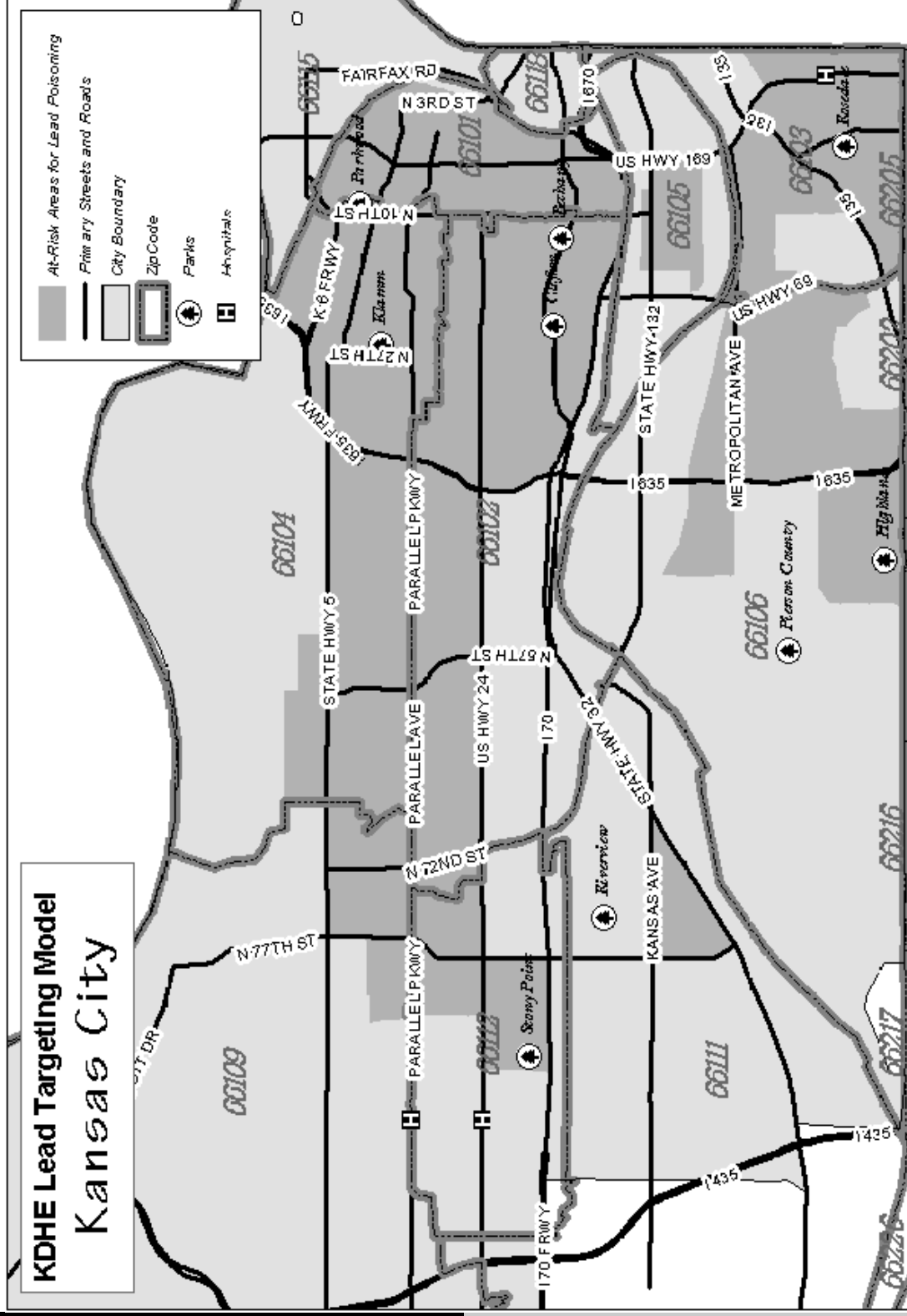
# Kansas City, Kansas Vicinity High Risk Area Map

**Children  
who live  
in the  
high-risk  
area  
(gray on  
map)  
should  
be tested  
for lead  
today!**

**Targeting model used to determine “At-Risk” areas.**

Model developed using four census variables:

- 1) density of pre 1960 housing
- 2) density of minority population
- 3) density of impoverished population
- 4) density of children age 5 and under.

KDHE Lead Targeting Model  
Kansas City

**For more information contact: Wyandotte County Lead Poisoning Prevention Program (913) 573-6780  
The Kansas Childhood Lead Poisoning Prevention Program toll-free (866)-865-3233  
Mid America Poisoning Control Center toll-free (800)-222-1222.**

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# Overland Park Vicinity High Risk Area Map

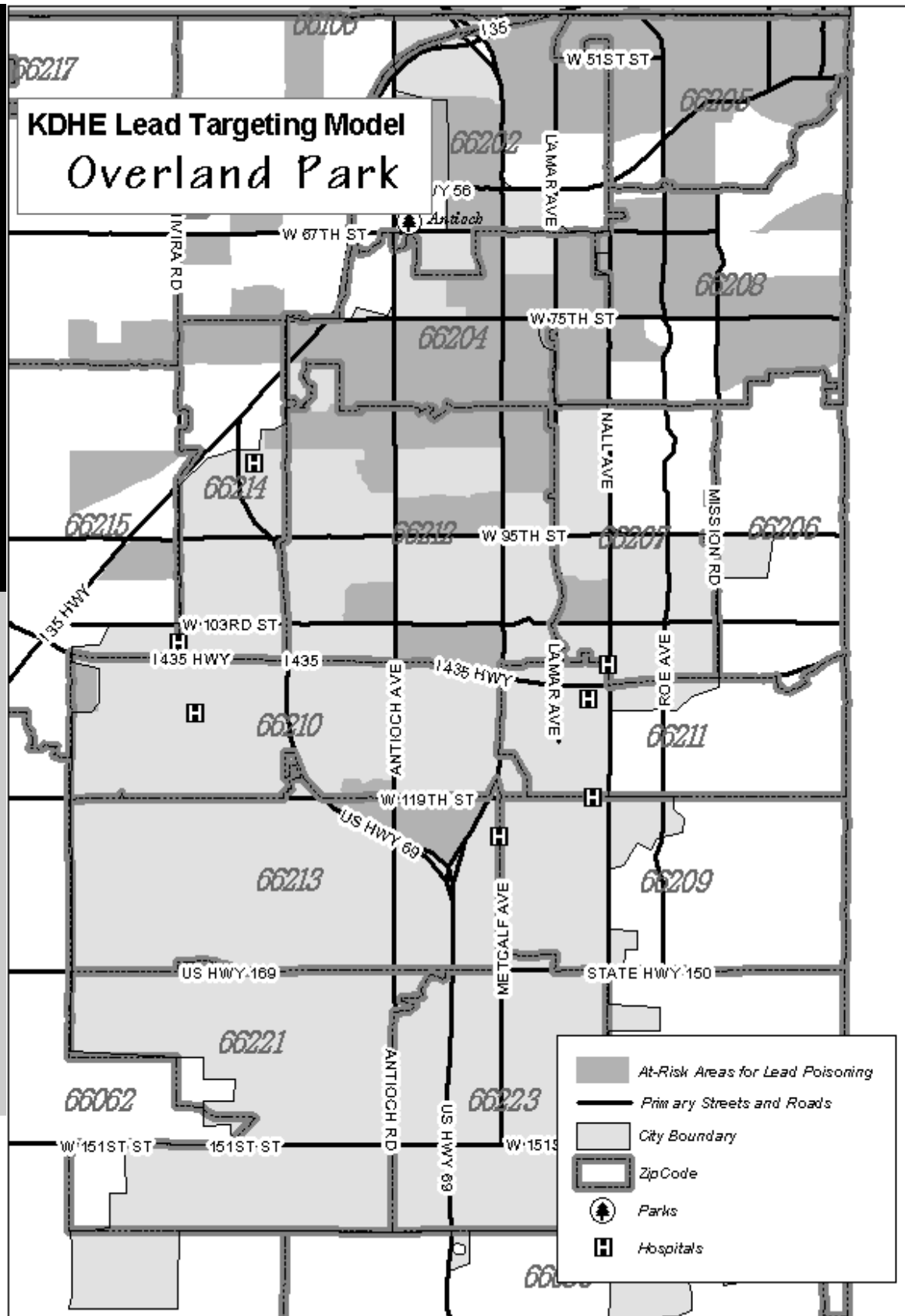
**Children who live in the high-risk area (gray on map) should be tested for lead today.**

**Targeting model  
used to deter-  
mine  
“At-Risk” areas.**

Model developed using four census variables:

- 1) density of pre 1960 housing
- 2) density of minority population
- 3) density of impoverished population,
- 4) density of children age 5 and under.

*This map product is intended to provide users with better information regarding lead poisoning potential for young children. This map product is provided without representation or implied or expressed warranty of accuracy for any uses beyond those expressed. The originating agencies are not responsible for publication or use of this product for purposes other than expressed. This product may be corrected or updated as necessary without prior notification.*



**For more information contact: Johnson County Health Department (913) 477-8346  
The Kansas Childhood Lead Poisoning Prevention Program toll-free (866)-865-3233  
Mid America Poisoning Control Center toll-free (800)-222-1222.**

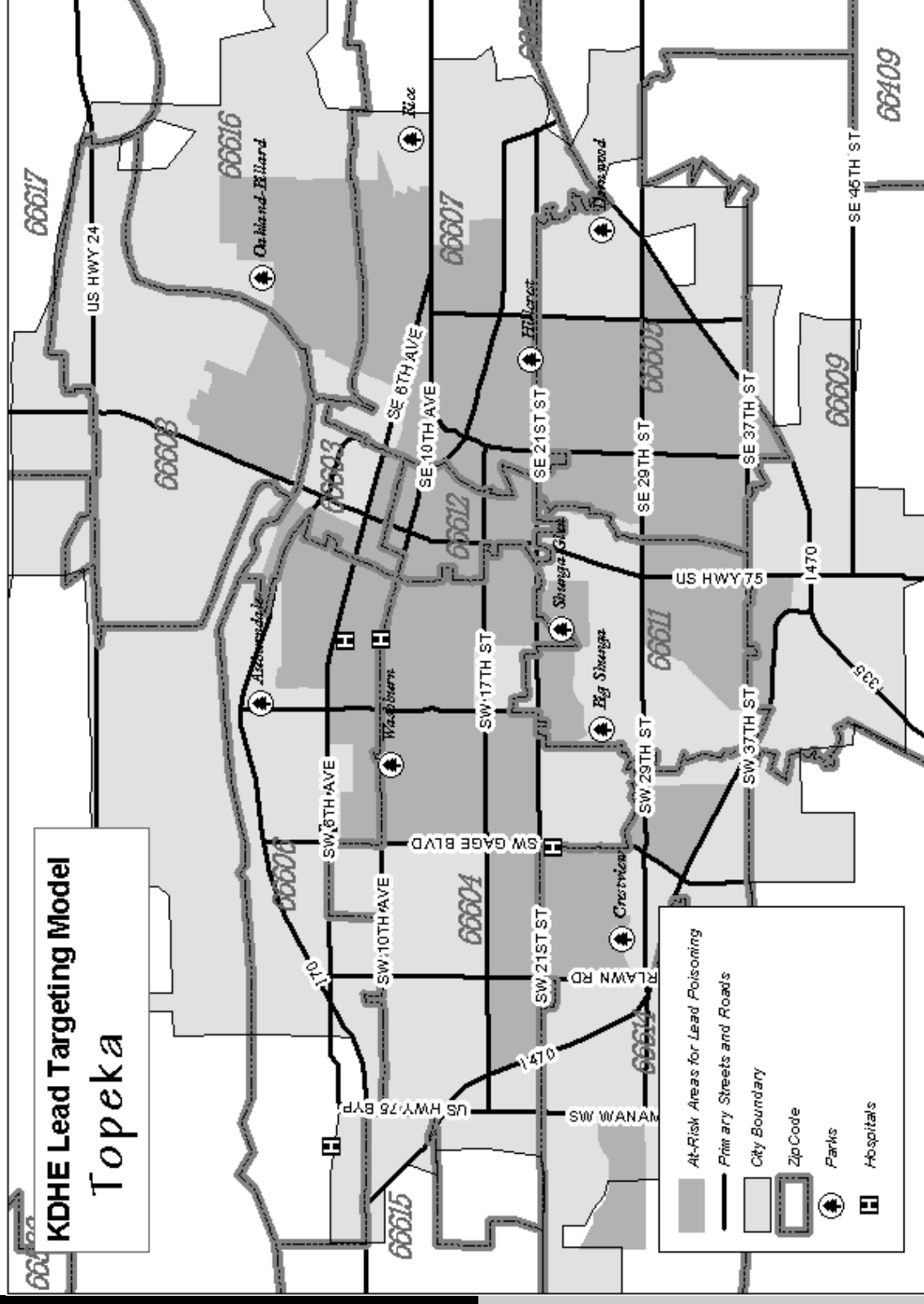
# Topeka Vicinity High Risk Area Map

**Children who live in the high-risk area (gray on map) should be tested for lead today!**

Targeting model used to determine "At-Risk" areas.

Model developed using four census variables:

- 1) density of pre 1960 housing
- 2) density of minority population
- 3) density of impoverished population,
- 4) density of children age 5 and under.



**For more information contact: Shawnee County Lead Poisoning Prevention Program (785) 291-2458**  
**The Kansas Childhood Lead Poisoning Prevention Program toll-free (866)-865-3233**  
**Mid America Poisoning Control Center toll-free (800)-222-1222.**

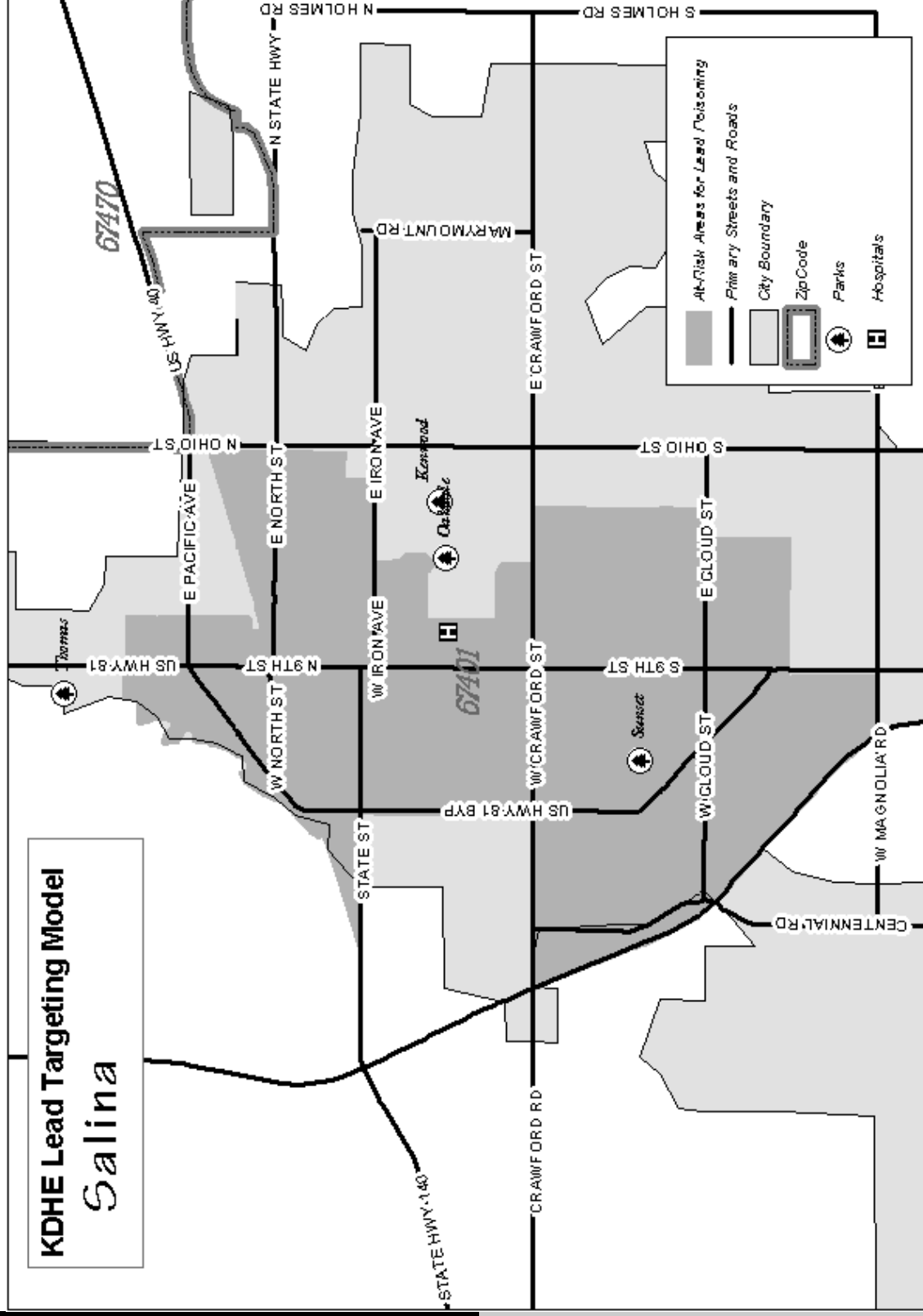
# Salina Vicinity High Risk Area Map

**Children  
who live  
in the  
high-risk  
area  
(gray on  
map)  
should  
be tested  
for lead  
today!**

**Targeting model used to determine “At-Risk” areas.**

Model developed using four census variables:

- 1) density of pre 1960 housing
- 2) density of minority population
- 3) density of impoverished population
- 4) density of children age 5 and under.



**For more information contact: Saline County Lead Poisoning Prevention Program (785) 826-6602**  
**The Kansas Childhood Lead Poisoning Prevention Program toll-free (866)-865-3233**  
**Mid America Poisoning Control Center toll-free (800)-222-1222.**

*This map product is intended to provide users with better information regarding lead poisoning potential for young children. This map product is provided without representation or implied or expressed warranty of accuracy for any uses beyond those expressed. The originating agencies are not responsible for publication or use of this product for purposes other than expressed. This product may be corrected or updated as necessary without prior notification.*

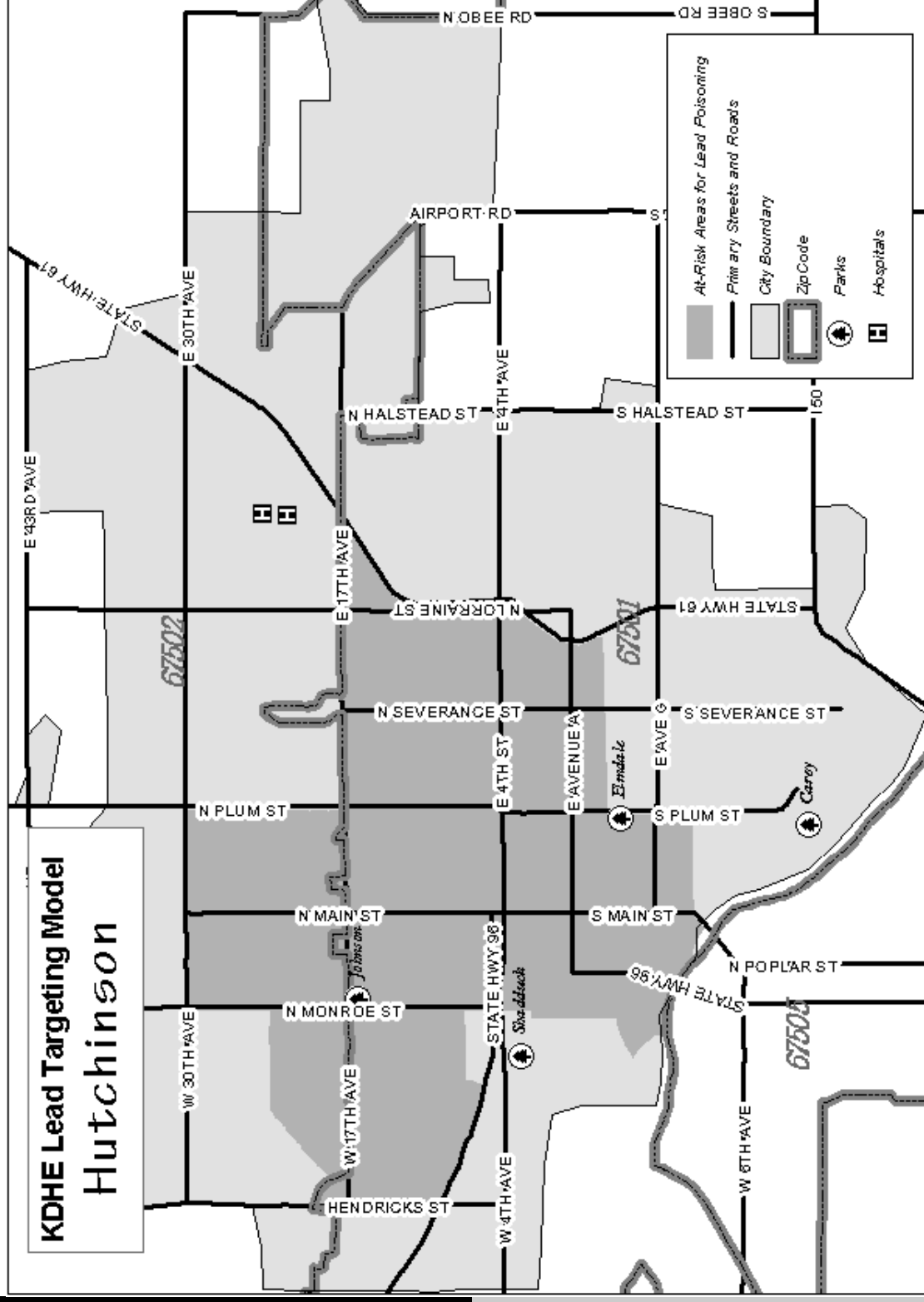
# Hutchinson Vicinity High Risk Area Map

**Children who live in the high-risk area (gray on map) should be tested for lead today!**

Targeting model used to determine "At-Risk" areas.

Model developed using four census variables:

- 1) density of pre 1960 housing
- 2) density of minority population
- 3) density of impoverished population,
- 4) density of children age 5 and under.



**For more information contact: Reno County Health Department (620) 694-2900  
The Kansas Childhood Lead Poisoning Prevention Program toll-free (866)-865-3233  
Mid America Poisoning Control Center toll-free (800)-222-1222.**



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## LOCAL LEAD RESOURCES

Kansas Childhood Lead Poisoning Prevention Program  
[www.unleadedks.com](http://www.unleadedks.com)  
1-866-UnleadedKS (865-3233)

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316-660-7387

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Unified Government of Wyandotte County  
913-573-6780

## NATIONAL RESOURCES

Centers for Disease Control and Prevention  
[www.cdc.gov/nceh/lead/lead.htm](http://www.cdc.gov/nceh/lead/lead.htm)  
(800) 311-3435

EPA National LEAD Information Center  
[www.epa.gov/lead/nlic.htm](http://www.epa.gov/lead/nlic.htm)  
(800) 424 - LEAD

The Coalition to End Childhood Lead Poisoning  
(800) 370 – 5323

Alliance For Healthy Homes  
[www.afhh.org](http://www.afhh.org)  
(202) 543 – 1147

## Acknowledgements

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